

Smile Survey 2002



The Oregon Department of Human Services Oral Health Section



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Introduction

The Oregon Department of Human Services Oral Health Section (OHS) presents the results of *Smile Survey 2002*.

For *Smile Survey 2002*, the OHS collected data from more than 3,900 first, second, and third grade children in the first few months of 2002. These results establish a new baseline from which to measure our progress in helping children receive the preventive dental services necessary to protect their oral health. This survey is also benchmarked against the national Healthy People 2010 objectives and data from other states. This information will be used to set goals for Oregon's public health system and to develop programs and policies that more effectively meet the oral health needs of all the children in our state.

Smile Survey 2002 presents key findings for three main areas: income level, race/ethnicity, and access. Utilizing charts, the findings presented in this report are consistent with national data indicating that dental decay is one of the most common childhood diseases, five times more prevalent than pediatric asthma. Fortunately, we know how to inexpensively prevent most oral health problems.

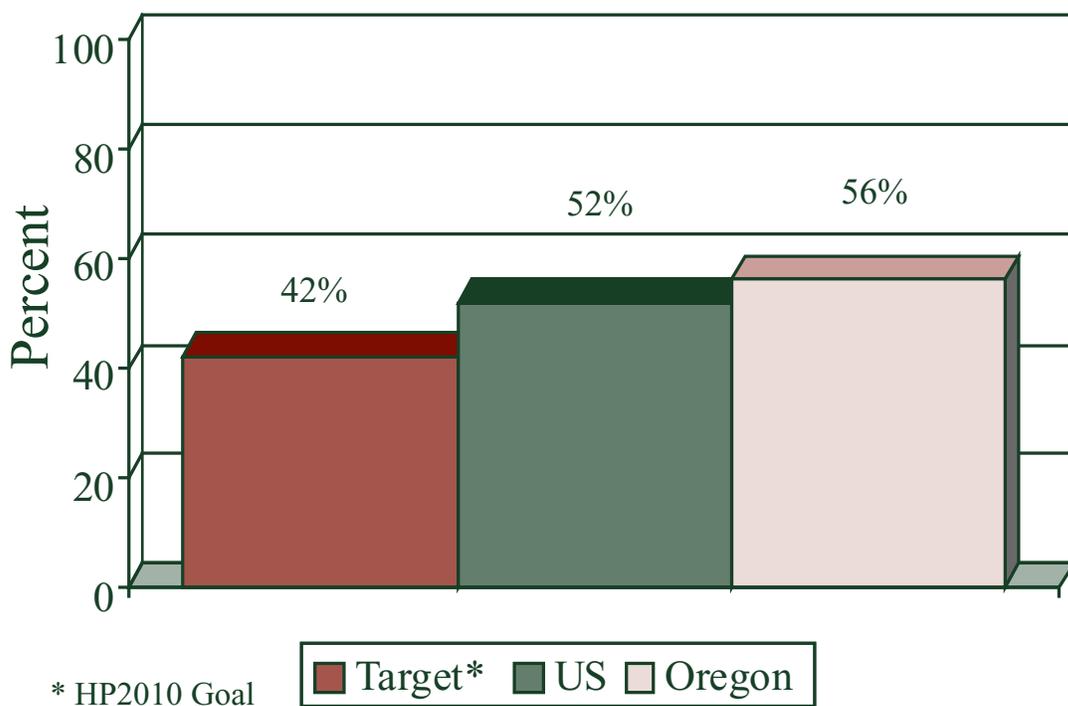
For *Smile Survey 2002*, we conducted a visual screening of the teeth of 3,900 Oregon elementary school children representing all 36 counties. All the *Smile Survey* screenings were conducted using gloves, penlight, and a tongue blade. When necessary, screeners used a toothbrush or swab to remove excess debris. The diagnostic criteria outlined in the Association of State and Territorial Dental Directors 1999, Basic Screening Surveys: An Approach to Monitoring Community Oral Health, was used by all screeners. In addition, parents completed take home surveys.

Smile Survey 2002 Key Findings

- #1: Dental decay is a significant problem for children in the Oregon Smile Survey.*
- û More than half the children surveyed suffer from dental decay. Dental decay increases with age.
- #2: Many of Oregon's children have untreated dental decay in their primary and permanent teeth.*
- û One quarter of children surveyed have That has not been treated.
- #3: Poor children have substantially greater decay.*
- û Children who qualify for the School Free and Reduced-Price Meal program have substantially higher rates of decay and are more likely to not be treated.
- #4: Poor children experience greater difficulties accessing oral health care.*
- û A great number of poor children do not have annual dental visits and many have had trouble accessing a dentist in the two years prior to the survey.
- #5: Children of color in Oregon have more dental decay.*
- û Treated and untreated decay is much more common among children of color than white children. Children living in households in which a language other than English is spoken have higher rates of decay and are less likely to have visited a dentist.
- #6: Not enough Oregon children have dental sealants.*
- û Race, income, insurance coverage, and language all influence the likelihood of a child having dental sealants.

Key Finding #1

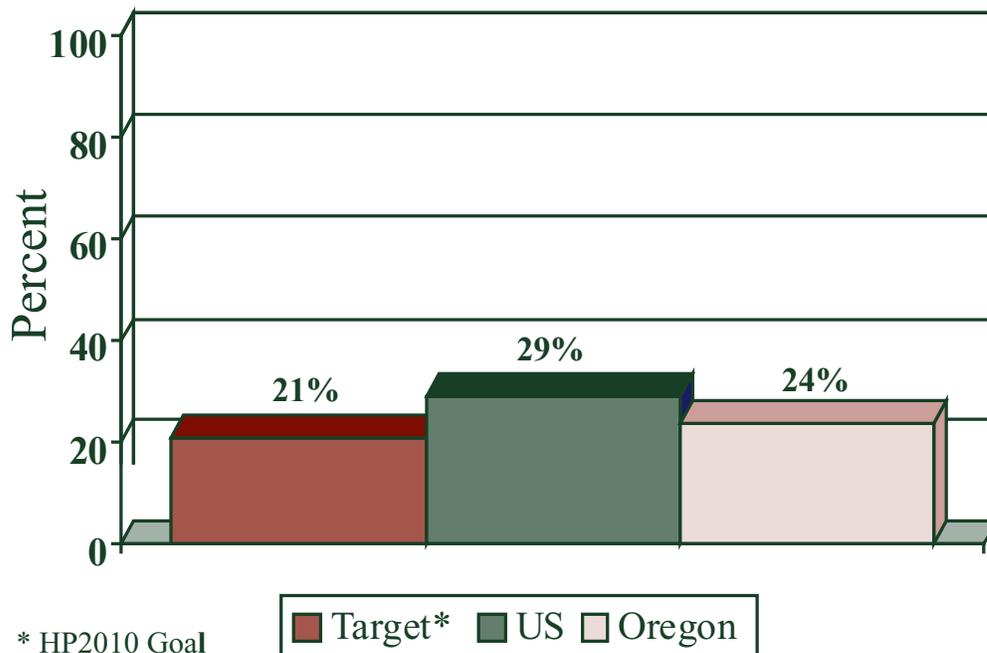
Dental decay is a significant problem for children in Oregon.



Children (6 -8 years old) with dental caries experience in primary or permanent teeth.

Oregon's Smile Survey 2002 shows that nearly 6 out of 10 children suffer from tooth decay. Children are affected by this disease early and continue to experience decay at greater rates as they grow older. Children in the survey aged 6-8 had a caries rate of 56%. However, this rate jumps to over 63% for 9 year-olds.

Key Finding #2
Many of Oregon's children have untreated dental decay in their primary and permanent teeth.



Children (6-8 years old) with untreated dental decay in primary and permanent teeth.

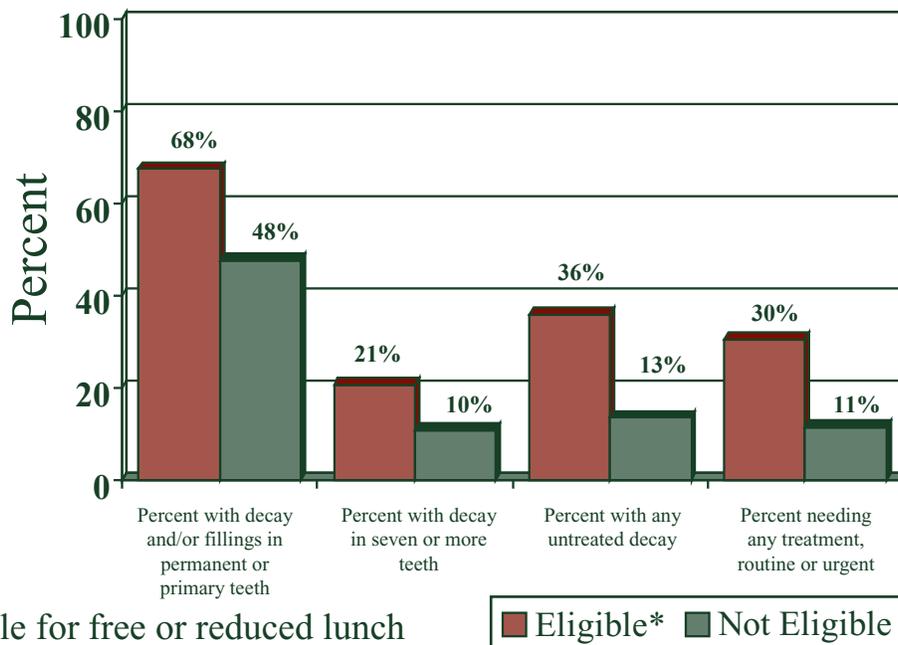
The U.S. Surgeon General's Report on Oral Health states that when decay in children is untreated it becomes a chronic condition later in life. This may contribute to lung diseases, stroke, and premature births and low birth weight. 1 in 4 Oregon children had untreated decay.

The Task Force on Community Preventive Services found that dental sealants are effective in reducing tooth decay for children and adolescents with varying levels of risk and from different socio-economic backgrounds.

-CDC

Key Finding #3

Poor children have substantially greater decay.



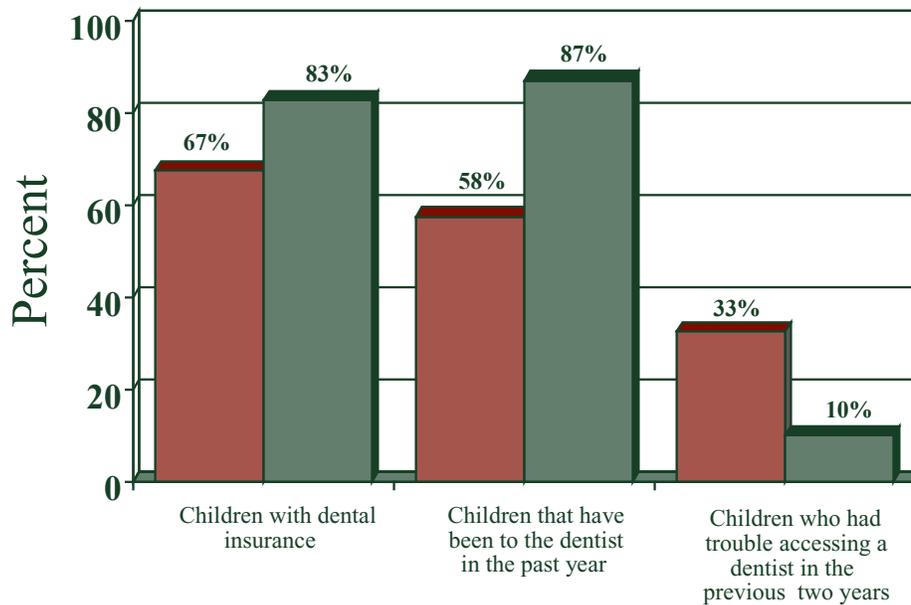
Children from low-income families in Oregon have substantially greater decay and treatment needs.

Smile Survey 2002 looked at children who were eligible and those who were not eligible for the federal School Free and Reduced-Price Meal program. Children who were eligible for the program have significantly more decay, rampant decay, and untreated decay compared to children who were not eligible for the program.

Poor children were three times more likely to have untreated decay.

Key Finding #4

Poor children experience greater difficulties accessing oral health care.



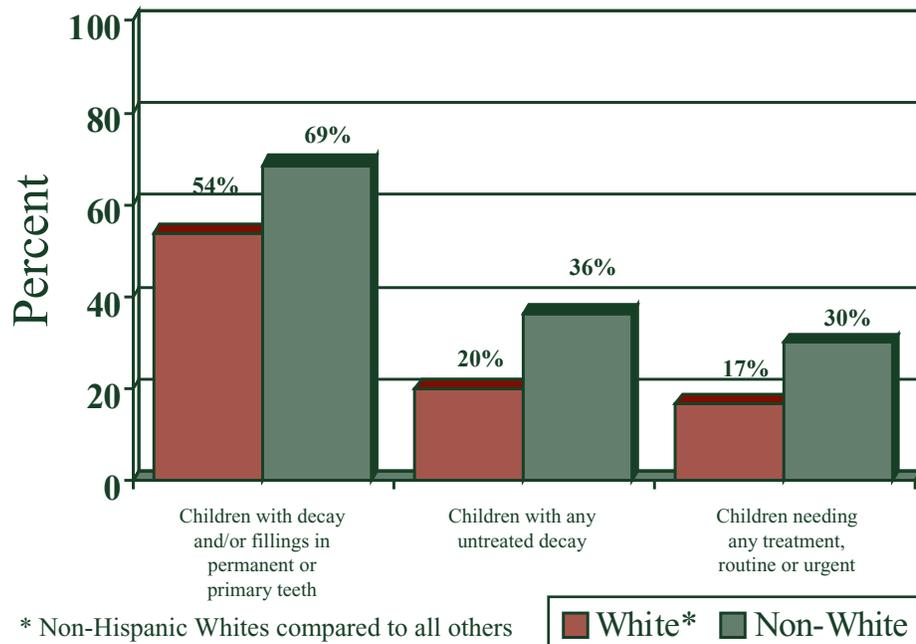
* Eligible for free or reduced lunch ■ Eligible* ■ Not Eligible

Children from low-income households are at greater risk of not getting care. Only 58% of the children eligible for the federal School Free and Reduced-Price Meal program visited a dentist in the past year compared with 87% of children not eligible. In addition, poor children were 3 times more likely to have trouble accessing care.

The primary reason for not having been to a dentist in the last year was “cost” (38%). The primary reasons for not having a dental visit in the last two years were “could not afford it” (64%) and “no insurance” (58%).

Key Finding #5

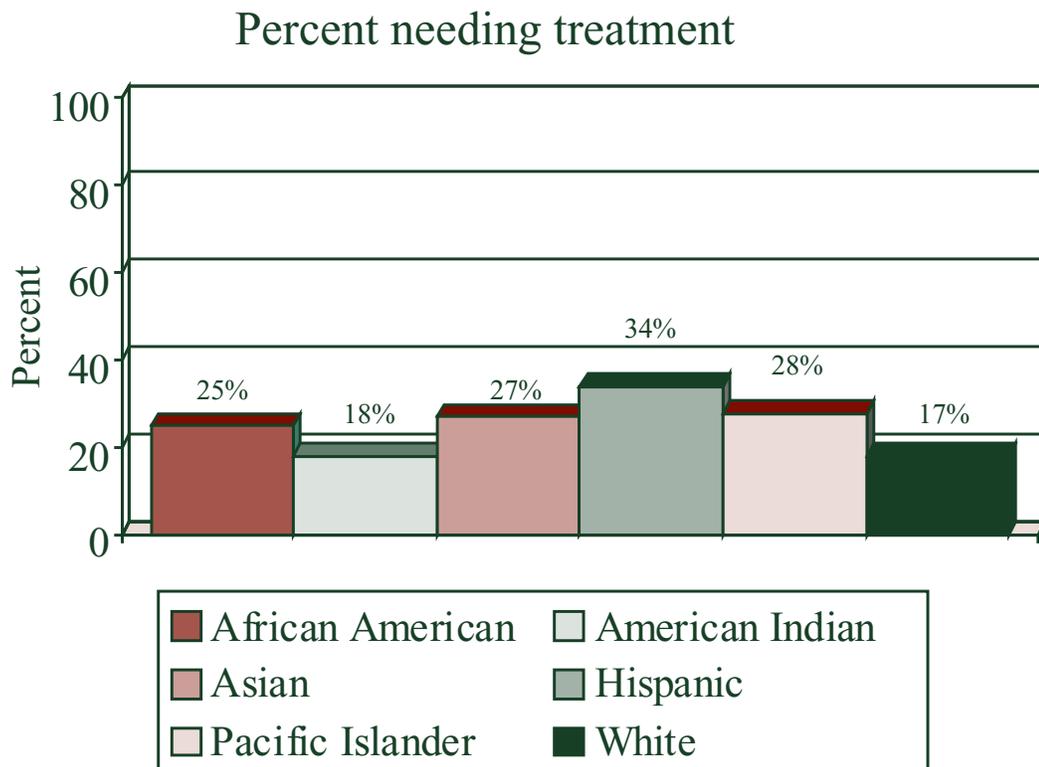
Children of color have more dental decay.



Children of color are nearly twice as likely to have untreated dental decay

The results of *Smile Survey 2002* reveal significant disparities based on race and ethnicity. In particular, Asian, Pacific Islander, and Hispanic children had more decay, fewer dental visits, and lower percentages of dental insurance than white children. This disparity is also evident in children with untreated decay and access to care.

*Key Finding #5
Children of color
have more dental decay. Cont...*

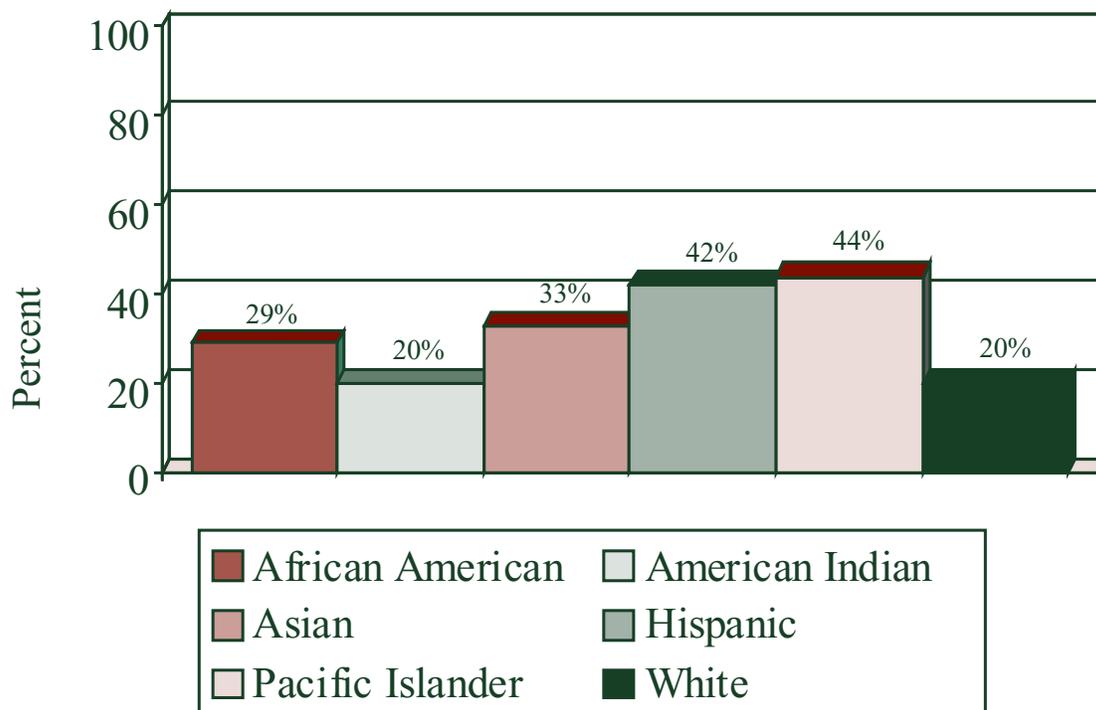


Note: Categories include multiple responses. E.g., if a respondent reported being White and Asian, they are represented in both categories.

Among African American, Asian, and Pacific Islander children, more than 1 in 4 needed dental treatment. Among Hispanic children the rate jumps to more than 1 in 3. Untreated decay rates are even higher.

*Key Finding #5
Children of color
have more dental decay. Cont...*

Percent with untreated decay

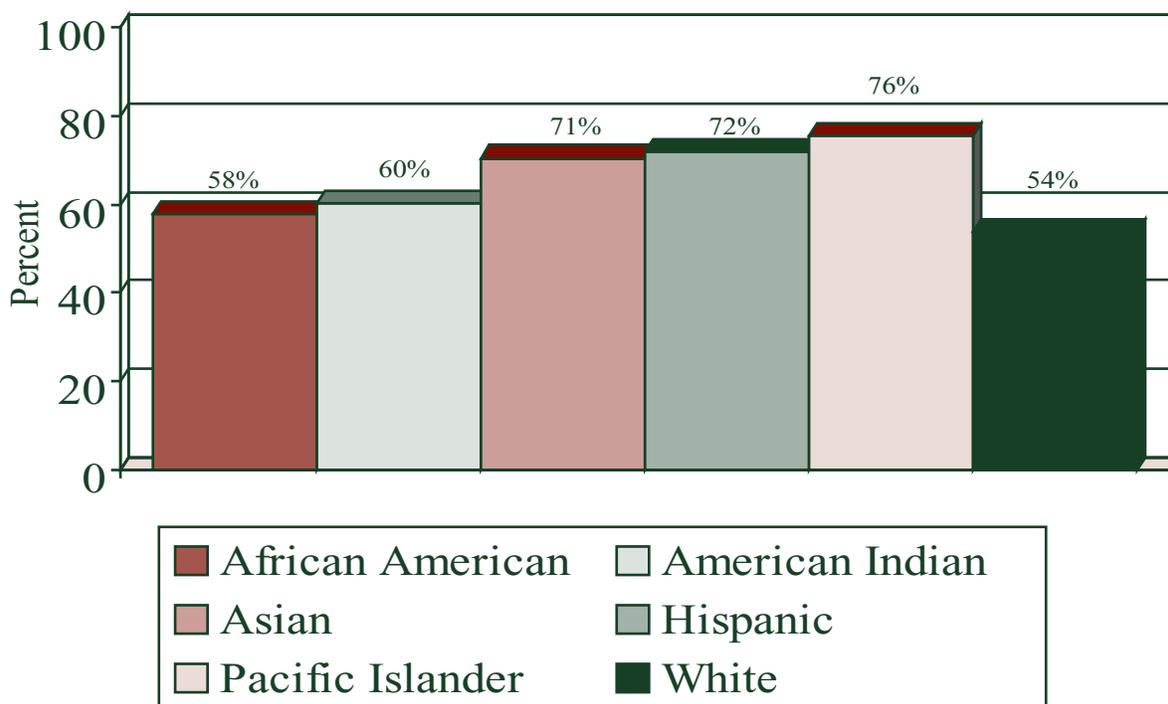


Note: Categories include multiple responses. E.g., if a respondent reported being White and Asian, they are represented in both categories.

Twenty nine percent of African American children have untreated decay. 33% of Asian children have untreated decay, and over 42% of Hispanic and Pacific Islander children have untreated decay.

*Key Finding #5
Children of color
have more dental decay. Cont...*

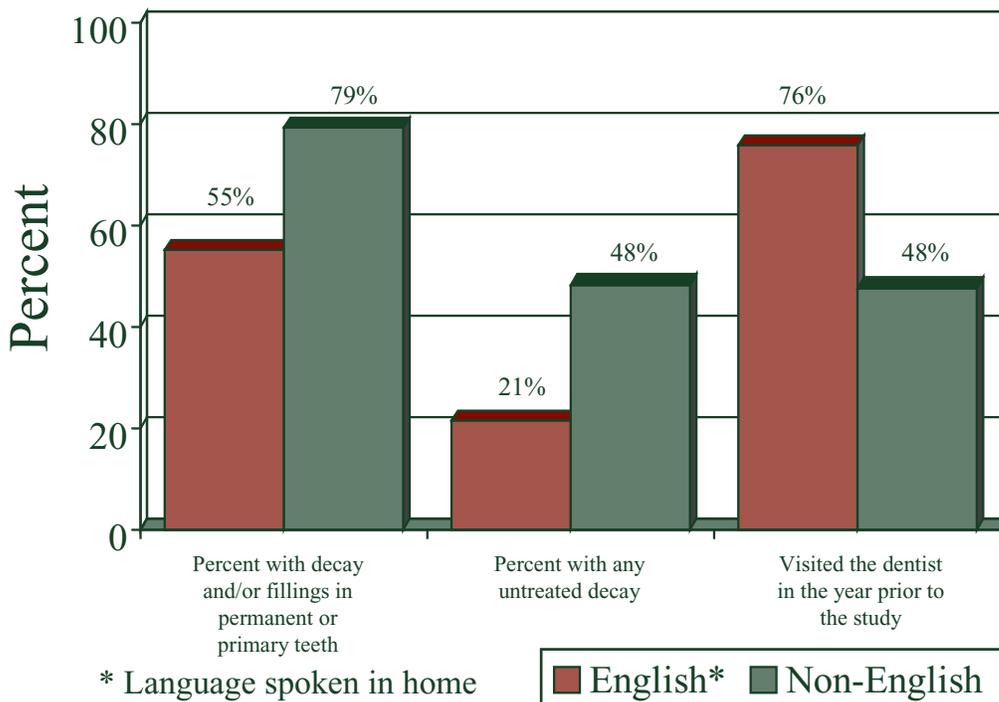
Percent with decay and/or fillings
in permanent or primary teeth



Note: Categories include multiple responses. E.g., if a respondent reported being White and Asian, they are represented in both categories.

Over 70% of Asian and Hispanic children have decay and/or fillings in their teeth. Three quarters of Pacific Islander children have decay and/or fillings in their teeth.

*Key Finding #5
Children of color
have more dental decay. Cont...*

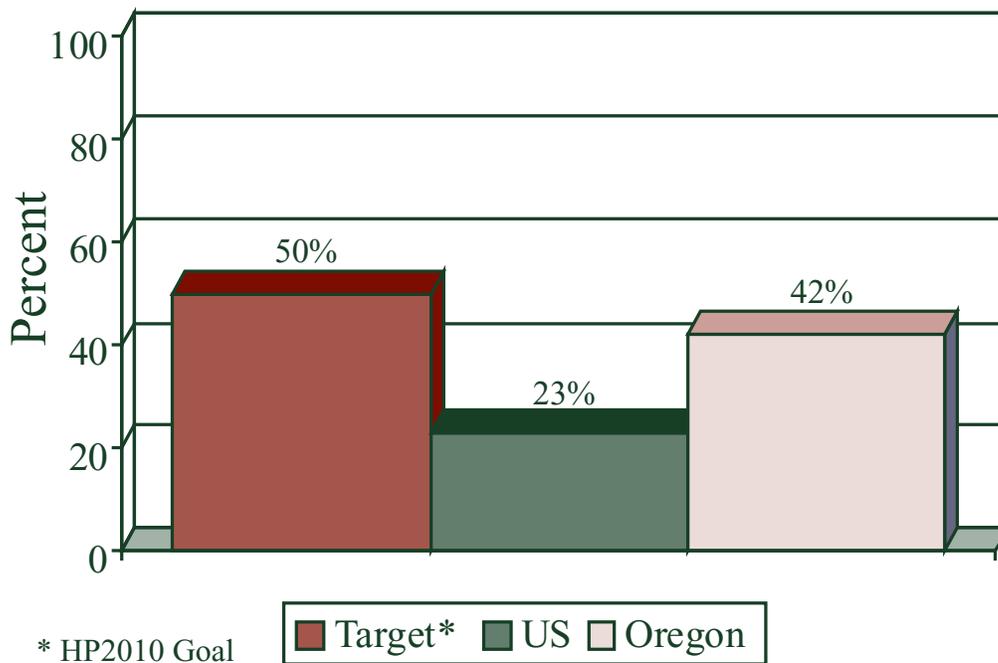


Oral Health and Language Spoken in the Home

The language spoken in the child's home directly relates to the likelihood that he or she will have decay and untreated decay. It also impacts whether or not the child had a visit to the dentist in the past year.

Almost 80% of children residing in non-English speaking homes have decay compared with 55% of children in English speaking households. Almost half of these same children have untreated decay, more than double the rate of children in English speaking households. And less than half have visited the dentist in the last year.

*Key Finding #6
Not enough Oregon children
have dental sealants.*



Children 8 years old who have received dental sealants on their molar teeth.

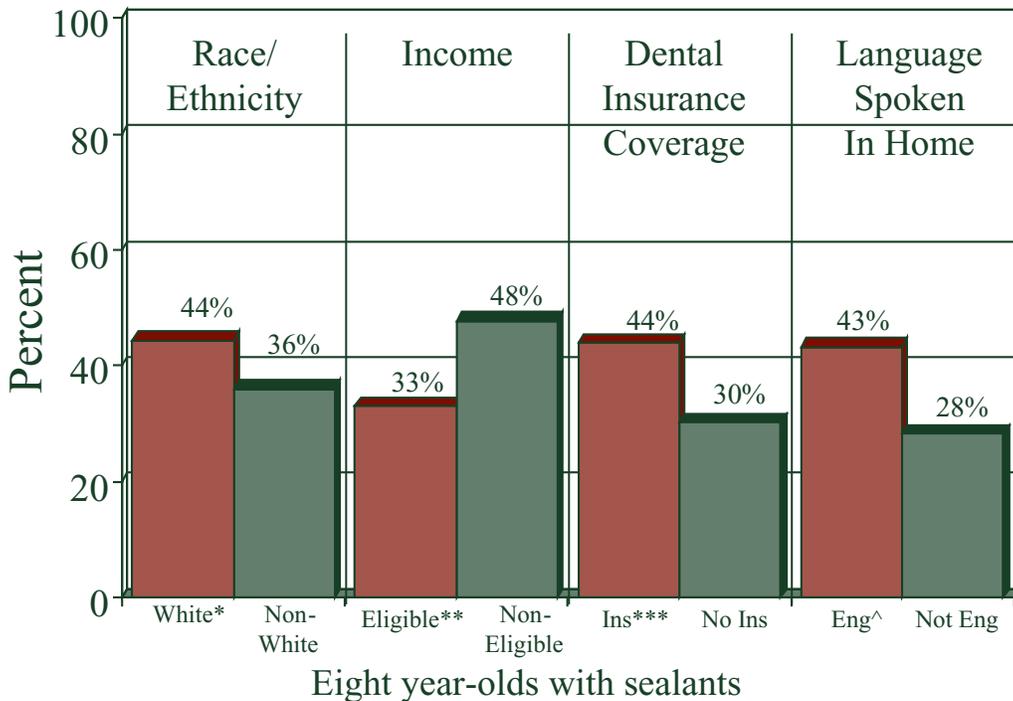
Two thirds of decay in school-age children occurs in pits and fissures, the chewing surfaces of the teeth. Protective sealants applied to the chewing surfaces of children's molars reduce the potential for decay. Sealants can be applied inexpensively, but are used much too infrequently.

"Left untreated, dental decay in children can cause pain, malnutrition, and poor appearance, all of which can lower a child's self-esteem and ability to succeed."

-CDC Promising Practices in Chronic Disease Prevention and Control

Key Finding #6

Not enough Oregon children have dental sealants. Cont...



* Those who reported only White race and no Hispanic ethnicity vs. those who reported any nonwhite race and/or Hispanic ethnicity.

**Eligible for free or reduced lunch

*** Ins = has dental insurance; No Ins = no dental insurance

^ Eng = language spoken in home is English; Not Eng = language spoken in home is not English

Children of color, poor children, children without dental insurance, and children living in non-English speaking households are much less likely to receive dental sealants. Within each of those groups, fewer than 1 in 3 children received dental sealants.

Next Steps

Although Oregon fares better than some states in providing dental sealants, we still have much work to do. *Smile Survey 2002* has provided the first comprehensive picture of the oral health status of children across Oregon. The picture tells us that all children, but specifically poor children, children of color, and children in non-English speaking households have significant unmet oral health needs. Additional and future surveys will let us know if we are making progress.

Decay places a burden on children. Children with decay suffer pain, poor self-esteem, missed school days, and the cost of treatment. Better oral health would substantially improve the quality of life for these children. We have major barriers to overcome. There is a chronic shortage of dental practitioners in Oregon relative to the demand, particularly in rural areas. Dental insurance for adults is compromised which directly impacts the way in which children utilize dental coverage.

Cost effective school-based and school-linked dental sealant programs need to be expanded to all parts of Oregon. In Multnomah County, 72% of third graders have sealants. Multnomah county operates a successful school-based dental sealant program that will greatly reduce the amount of decay in children as they grow older. Since sealants are not usually applied until a child is about seven years old, we need to start earlier to prevent decay in primary or baby teeth.

In addition, only 20% of Oregonians receive the benefits of optimally fluoridated water and only 2% live in communities with naturally occurring fluoride at optimal levels. The Healthy People 2010 goal is 75% of the population served by optimally fluoridated water. The Surgeon General has called optimal water fluoridation, “One of the 10 great public health achievements of the 20th century.”

Achieving the Healthy People 2010 objectives on oral health will require linking the national objectives with the state’s resources and programs. Our state oral health program needs more resources to build infrastructure and capacity and to direct and integrate strategies at the federal, state, and local levels. Our dental public health programs and schools also need to develop public/private partnerships to effectively increase our reach and target those children who suffer most disproportionately.

Most of all, we need to maintain a focus on oral health as a part of a child’s overall well-being and continue to identify barriers to optimal health. By doing so, we can develop policy and legislative solutions and implement changes to improve oral health, particularly for low-income and vulnerable children in all parts of Oregon.

Appendix

Methods

Smile Survey 2002 was conducted using a probability proportional to size (PPS) method designed to provide a representative sample of Oregon public school children in grades 1-3. The sample was stratified by the six state health regions and by percent of children eligible for the federal free and reduced lunch program. A list of all public elementary schools in Oregon was obtained from the Oregon Department of Education and sorted by health region and free/reduced lunch eligibility of the student body. This method ensures proportional sampling from the health regions of the state and good distribution in the sample across socio-economic levels of the population. A total of 86 schools were selected to participate in the study.

Students who wished to participate in the study had to show parental approval via a signed consent form. The teeth of participants were then examined by a registered dental hygienist using gloves, penlight, a tongue blade and a disposable mirror. When necessary, hygienists used a toothbrush or swab to remove excess debris. If necessary, a toothpick was used to check for the presence of dental sealants.

All hygienists attended a one-day training session. The diagnostic criteria outlined in the Association of State and Territorial Dental Directors 1999, Basic Screening Surveys: An Approach to Monitoring Community Oral Health, was used by all hygienists.

In addition to participant screenings, parents completed take home surveys.

Results

Of the 86 schools originally selected, 70 agreed to participate. The 70 schools were located in 22 of Oregon's 36 counties and included an enrollment of 9,999 children in the first, second, and third grade. Data were collected on 3,956 1-3 grade students in January, February, and March 2002. Participation reflects a 40% response rate.

The children ranged in age from 5-10 years with a mean of 7.5 years. The majority (79%) of the children were white, 14% Hispanic, 5% African American, and 3% Asian. Of the 3,204 children whose families provided information on eligibility for the school free and reduced-price meal program, 36% were eligible.

Thirteen registered dental hygienists completed the examinations.



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